

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority filed in European Patent Office on 1/13/2003 under 35 U.S.C. 119(a)-(d).

2. It is noted that this application appears to claim subject matter disclosed in prior International Application PCT/IB03/06286, filed 12/10/2003. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii)

and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference

in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 7/1/2005 have been considered and made of record by the examiner.

Drawings

4. Figure 3 should be designated by a legend such as **--Prior Art--** because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance

5. The drawings are objected to because the rectangular boxes shown in the drawings should be provided with descriptive text in Fig. 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. It is suggested the title to include the phrases "midambles" and "channelization codes", as it has already being used in GPP TS 25.221 version 4.1.0 Release 4, e.g., title to be replaced by "Mobile station for retrieving an information related to an association between midambles and channelization codes",

7. The attempt to incorporate subject matter into this application by reference to "3GPP TS 25.221 version 4.1.0" is ineffective because the root words "incorporate"

and/or "reference" have been omitted, See 37 CFR 1.57(b)(1); and the copy of the reference document is not submitted, and it is not outlined in the submitted IDS.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.**
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.**
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.**
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.**
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.**
- (f) BACKGROUND OF THE INVENTION.**
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.**
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).**
- (i) DETAILED DESCRIPTION OF THE INVENTION.**
- (j) CLAIM OR CLAIMS** (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE** (commencing on a separate sheet).
- (l) SEQUENCE LISTING** (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

> The applicant should insert the pertinent headings above into their specification so that it more closely complies with the standard USPTO format.

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> Bolded letters above should be included as applicable – e.g., the examiner does not believe that letters c, d, e and i will be required.

Claim Objections

8. Claim 14 is objected to because of the following informalities: replace "said reference" with phrase –a reference" in line 4, due to insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-14 are rejected under 35 U.S.C. 101 because claims 1-14 fail to fall within a statutory category of invention because 1) a signal is not a process because it is not a serial steps, 2) a signal has no physical structure, thus it does not fit within the definition of a machine, 3) a signal is not a matter but a form of energy and therefore is not a composition of matter, and 4) a signal is a form of energy, thus it does not fit the definition of manufacture.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudolf et al. (EP 1 137 201 A1; 09-26-2001 Mitsubishi Electric) in view of 3GPP Standardization Committee (3GPP TS 25.221 version 4.1.0 Release 4).

Regarding claim 1, Rudolf et al. disclose a mobile station for use in a telecommunication system, said mobile station being arranged to receive a signal from a base station (Fig. 1; par. 1), the signal comprising multiple communications (Fig. 2; par. 7), each communication of said multiple communications having a first characteristic ("midamble" in par. 22) and a second characteristic ("spreading code" in

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par. 23) enabling retrieval of said communication from said signal. Rudolf et al. is silent about the mobile station further being arranged to receive a reference to said first and second characteristics and to obtain said first and said second characteristics through said reference.

3GPP Standardization Committee disclose reference to an association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree (Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope)

Regarding claim 2, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said first characteristic comprises a midamble code and said second characteristic comprises a spreading code (Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also

knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 3, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said reference to said first and second characteristics is a reference to an association tree for defining associations between said first and second characteristics (association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree, as shown in Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 4, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 3 above. Rudolf et al. also disclose that said reference to said association tree comprises a maximum number of mobile stations that can be communicating with said base station ("number of spreading code" and "spreading factor used" in par. 42; also see "association rules starting in par. 44).

Regarding claim 5, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said reference to said first and second characteristics comprises a representation of a relation between said first characteristic and said second characteristic (association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree, as shown in Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 6, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 3 above. Rudolf et al. also disclose that said reference to said association tree comprises an actual number of mobile stations that can be communicating with said base station ("number of spreading code" and "spreading factor used" in par. 42; also see "association rules starting in par. 44; Examiner notes that the actual number is subset of maximum number at anytime).

Regarding claim 7, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said reference to said first comprises a representation of said first characteristic (association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree, as shown in Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 8, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 7 above. Rudolf et al. also disclose that said representation of said first characteristic comprises a binary word, each bit of said binary word indicating whether said first characteristic is used by said multiple communications ("binary element of said word" in par. 22).

Regarding claim 9, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said reference to said first and second characteristics is transmitted in a channel (page 54: section 8.2.1 BCH).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 10, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said channel is a broadcasting channel (page 54: The broadcast channel in section 8.2.1).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 11, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. 3GPP Standardization Committee also discloses that said communication is retrieved from said multiple communications using a multi user detection algorithm ("joint channel estimation" under section 5.3.3.3).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Regarding claim 12, Rudolf et al. and 3GPP Standardization Committee discloses as recited in rejection of claim 1 above. Rudolf et al. also disclose that said communication is retrieved from said multiple communications using a joint detection algorithm ("the algorithm, such as the Joint-Detection" in par. 16)

Regarding claim 13, Rudolf et al. disclose a base station for use in a telecommunication system, said base station being arranged to transmit a-signal to a

mobile station (Fig. 1; par. 1), the signal comprising multiple communications (Fig. 2; par. 7), each communication of said multiple communications having a first characteristic ("midamble" in par. 22) and a second characteristic ("spreading code" in par. 23) enabling retrieval of said communication from said signal. Rudolf et al. is silent about the base station further being arranged to transmit a reference to said first and second characteristics through which said first and said second characteristic can be obtained.

3GPP Standardization Committee disclose reference to an association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree (Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope)

Regarding claim 14, Rudolf et al. disclose a signal for transmission from a base station to a mobile station (Fig. 1; par. 1), said signal comprising a reference to a first characteristic ("midamble" in par. 22) and a second characteristic ("spreading code" in par. 23), said first and second characteristic enabling said mobile station to retrieve a communication from received multiple communications ("Joint-Detection" in par. 16). Rudolf et al. is silent about a reference enabling said mobile station to retrieve said first and second characteristics.

3GPP Standardization Committee disclose reference to an association tree for defining associations between the midamble code and the spreading code are relations, typically defined in the form of a tree (Fig. B.2.1 on page 72 of 3GPP TS 25.221 V4.1.0, which allows the mobile station not only know which midamble codes may be used, but it also knows which spreading code or channelization code can be associated to that midamble code).

Therefore, It would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teaching of Rudolf et al. and 3GPP Standardization Committee for the purpose of mapping of transport channels onto physical channel as suggested by and 3GPP Standardization Committee (page 8: scope).

Remarks

12. No claim is allowed.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Doetsch et al. (US 2002/0154678 A1).

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nader Bolourchi whose telephone number is (571) 272-8064. The examiner can normally be reached on M-F 8:30 to 4:30.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David. C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

/Nader Bolourchi/
Examiner, Art Unit 2611
4/6/2008

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/David C. Payne/

Supervisory Patent Examiner, Art Unit 2611